UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/911,740	07/25/2001	Turguy Goker	50103-352	5600

7590 09/09/2004

John A. Hankins
McDERMOTT, WILL & EMERY
600 13th Street, N.W.
Washington, DC 20005-3096

EXAMINER	
KIM, SANG K	

ART UNIT	PAPER NUMBER
3654	

DATE MAILED: 09/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
P.O. BOX 1450
ALEXANDRIA, VA 22313-1450
www.uspto.gov

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/911,740
Filing Date: July 25, 2001
Appellant(s): GOKER ET AL.

John A. Hankins Reg.#32029
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed on 5/6/04.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The brief does not contain a statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief. Therefore, it is presumed that there are none. The Board, however, may exercise its discretion to require an explicit statement as to the existence of any related appeals and interferences.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after non-final has been filed. (Note: applicant has failed to provide a statement regarding the status of amendments)

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

Appellant's brief includes a statement that appealed claims do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

No prior art is relied upon by the examiner in the rejection of the claims under appeal.

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Ohshita, EP 0467143 A2.

Referring to claims 1-2, Ohshita teaches a tape drive mechanism comprising a hub filler (a leader block, 3) coupled to a guide rail (5b); and means for preventing detachment (comprising: a guide arm 17, 18, coupled to the hub filler 3; and a guide arm motor 21 coupled to the guide arm 17, 18) of an end of tape (2) form the hub filler (3) during a tape unloading operation, as shown in figure 3.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 3-9 and 11-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohshita, EP 0467143 A2, in view of Rueger, U.S. Patent No. 4399936.

Referring to claims 3-4, 9, 11, and 16-17, Ohshita teaches a tape drive mechanism comprising a hub filler (a leader block, 3) coupled to a guide rail (5b); and means for preventing detachment (comprising: a guide arm 17, 18, coupled to the hub filler 3; and a guide arm motor 21 coupled to the guide arm 17, 18) of an end of tape (2) form the hub filler (3) during a tape unloading operation, as shown in figure 3.

Ohshita does not explain the speed of the cartridge motor relative the motor of the guide arm to insure if the hub filler is being dragged by the tape.

Rueger teaches the guide arm (52, 54,..etc.) and the guide arm motor (71) are arranged to provide drag on a tape (16)/and arranged to be dragged by the tape being unloaded from the tape drive mechanism (since the leader block 3 is attached by the tape 16 and the drive motor 20 winds the tape 16 which pulls the leader block 3, thus dragged by the tape 16 and also producing a frictional force), as shown in figures 1-2, and explained in column 7, lines 12-20.

Furthermore, Rueger shows the guide arm and the guide arm motor are arranged to <u>controllably</u> drag on a tape (since the motor 71 of the guide arm can also be used along with the drive motor 20, thereby understanding that the motors are

controlled to adjust the drag on a tape), as shown in figures 1-2, and explained in column 7, lines 12-20.

Ohshita discloses the claimed invention except for the guide arm motor arranged to be dragged/controlled drag by the tape. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Ohshita to provide the guide arm motor to be dragged by the tape as taught by Rueger, to prevent the tape from having slack which causes jamming.

With respect to claims 5-8, 12-15, and 18-20, as applied to claims above, Ohshita in view of Rueger inherently teach electrical induction and magnetic resistance, since an electric motor has a magnetic core producing magnetic resistance and generating voltage which can be determined by V(L)=L(inductance)x(di/dt). As explained above, dragging the hub filler will produce tension on the tape and frictional resistance by the guide arm since it is attached to the hub filler, which applies force to the hub filler in an opposite direction to a direction that the hub filler is traveling in the unloading operation.

(11) Response to Argument

With respect to claim 1, appellant argues that claim 1 is directed to "a tape drive mechanism comprising a hub filler coupled to a guide rail and means for preventing detachment of an end of tape from the hub filler during a tape unloading operation." Appellant's claim 1 is in means-plus function format and therefore must be interpreted within the guidelines of 35 U.S.C. 112, 6th paragraph. As required by the statute, the "means for preventing detachment..." is construed to cover the corresponding structure

described in the specification, and equivalents thereof. In the instant case, the description of the means for preventing detachment is found on page 5, lines 2-7, page 6, lines 10-19, page 8, lines 18-24, and page 9, line 1 through page 11, line 7. Appellant argues that in Ohshita, the guide arm motor is applying force in the same direction as the travel direction of the tape. Thus, this is opposite to the appellant's invention, in which the force of the motor in the present invention is in the direction opposite to that of the travel direction of the tape, as indicated by the force on the tape. According to appellant, the guide arm and the guide arm motor are not dragged in Ohshita.

As stated above, Ohshita teaches a tape drive mechanism comprising a hub filler (a leader block, 3) coupled to a guide rail (5b); and means for preventing detachment (comprising: a guide arm 17, 18, coupled to the hub filler 3; and a guide arm motor 21 coupled to the guide arm 17, 18) of an end of tape (2) form the hub filler (3) during a tape unloading operation, as shown in figure 3.

Ohshita shows appellant's claimed structure in figure 3. Furthermore, Ohshita shows the guide arm and the guide arm motor being dragged, since the tape cartridge (1) winds the tape which is attached to the hub filler (3), and the hub filler (3) is coupled to the guide arm (17,18). Even if the motor rotates in the same direction with the cartridge motor, in order to wind, it needs to have a tension. As shown in figure 3, the tape cartridge winds the tape meaning that the tape is being pulled, thereby dragging the tape, hub filler, guide arm and motor. Imagine if the guide arm and motor apply same directional force faster than the speed of the cartridge motor speed, simply the

tape would not be wound onto the tape cartridge and the device of Ohshita would not work. Basically, the tape must be pulled by the tape cartridge motor to create a tension in order to wind. Even with the same directional force applied by the guide arm and motor that these elements are still being dragged, as demonstrated by Ohshita.

The Examiner would like to point out that in claim 1, "means for preventing detachment of an end of tape from the hub filler during a tape unloading operation," is not limited to the guide arm by the guide arm motor. Applicant explains in the specification, on pages 8-9, "The drag force may be considered one type of means for preventing detachment of an end of tape 406 from the hub filler 402 during movement of the hub filler 402 along the guide rail 408 during an unloading operation. etc." Appellant explains in the specification that there are many other embodiments of the means for preventing detachments and thereby does not limit the means to the guide arm dragged by the guide arm motor. The means for preventing detachment in claim 1 is not limited to a guide arm coupled to the hub filler and the guide arm motor coupled to the guide arm, as explained by the appellant on pages 8-9.

Ohshita shows the means for preventing detachment of an end of the tape from the hub filler (3) during the movement of the hub filler (3) along the guide rail (5b) during an unloading operation, as shown in figure 3.

With respect to claim 2, the means for preventing detachment comprises a guide arm coupled to the hub filler and the guide arm motor coupled to the guide arm as was already addressed with respect to claim 1 above.

As stated above, Ohshita teaches a tape drive mechanism comprising a hub filler (a leader block, 3) coupled to a guide rail (5b); and means for preventing detachment (comprising: a guide arm 17, 18, coupled to the hub filler 3; and a guide arm motor 21 coupled to the guide arm 17, 18) of an end of tape (2) form the hub filler (3) during a tape unloading operation, as shown in figure 3.

With respect to claim 3, appellant argues that the examiner has not established that the guide arm motor and the guide arm provide the drag on the tape being unloaded from the tape drive mechanism.

Rueger teaches the guide arm (52, 54,..etc.) and the guide arm motor (71) are arranged to provide drag on a tape (16)/and arranged to be dragged by the tape being unloaded from the tape drive mechanism (since the leader block 3 is attached by the tape 16 and the drive motor 20 winds the tape 16 which pulls the leader block 3, thus dragged by the tape 16 and also producing a frictional force), as shown in figures 1-2, and explained in column 7, lines 12-20. Rueger explains in column 7, lines 12-20, "in the reverse rotation either the reverse rotation of the drive motor 20 or both the reverse rotation of the motor 71 causes the pantocam mechanism 44 (e.g. the guide arm) to travel the reverse direction back to the cartridge 12. etc."

As explained earlier with respect to claim 1, in order to wind the tape needs a tension. Thus the drive motor (20) would pull the tape, leader block, guide arm and motor which would provide a drag on the tape during unloading even if the motor winds in the same or opposite direction. Furthermore, Rueger shows another way that the drive motor (20) would provide force without the use of the motor (71). This would allow

the drive motor (20) to pull the leader block (3) attached by the tape (16) and the drive motor (20) winds the tape (16) which pulls the leader block (3), thus dragging the tape (16).

With respect to claims 5-8, appellant argues Rueger makes no mention of such a controller that provides tension in the tape by electrical induction and magnetic resistance within the guide arm motor, and frictional resistance of the hub filler and guide arm.

As stated above, Ohshita in view of Rueger inherently teach electrical induction and magnetic resistance, since an electric motor has a magnetic core producing magnetic resistance and generating voltage which can be determined by V(L)=L(inductance)x(di/dt). As explained above, dragging the hub filler will produce tension on the tape and frictional resistance by the guide arm since it is attached to the hub filler, which applies force to the hub filler in an opposite direction to a direction that the hub filler is traveling in the unloading operation.

With respect to claims 9 and 11, appellant argues that the combination of Ohshita and Rueger provide no such arrangement to controllably drag on a tape and prevent detachment of an end of the tape from a hub filler during movement of the hub filler along the guide rail during an unloading operation.

As stated above, Rueger teaches the guide arm (52, 54,..etc.) and the guide arm motor (71) are arranged to provide drag on a tape (16)/and arranged to be dragged by the tape being unloaded from the tape drive mechanism (since the leader block 3 is attached by the tape 16 and the drive motor 20 winds the tape 16 which pulls the leader

block 3, thus dragged by the tape 16 and also producing a frictional force), as shown in figures 1-2, and explained in column 7, lines 12-20.

Furthermore, Rueger shows the guide arm and the guide arm motor are arranged to controllably drag on a tape (since the motor 71 of the guide arm can also be used along with the drive motor 20, thereby understanding that the motors are controlled to adjust the drag on a tape), as shown in figures 1-2, and explained in column 7, lines 12-20.

Ohshita discloses the claimed invention except for the guide arm motor arranged to be dragged/controlled drag by the tape. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Ohshita to provide the guide arm motor to be dragged by the tape as taught by Rueger, to prevent the tape from having slack which causes jamming.

With respect to claims 12-15, appellant argues Rueger makes no mention of such a controller that provides tension in the tape by electrical induction and magnetic resistance within the guide arm motor, and frictional resistance of the hub filler and guide arm.

As stated above, Ohshita in view of Rueger inherently teach electrical induction and magnetic resistance, since an electric motor has a magnetic core producing magnetic resistance and generating voltage which can be determined by V(L)=L(inductance)x(di/dt). As explained above, dragging the hub filler will produce tension on the tape and frictional resistance by the guide arm since it is attached to the

hub filler, which applies force to the hub filler in an opposite direction to a direction that the hub filler is traveling in the unloading operation.

With respect to claims 16-17, appellant argues that the applied references fail to disclose the limitation of controllably applying of tension to the end of the tape in the direction toward the take-up reel.

As stated above, Rueger teaches the guide arm (52, 54,..etc.) and the guide arm motor (71) are arranged to provide drag on a tape (16)/and arranged to be dragged by the tape being unloaded from the tape drive mechanism (since the leader block 3 is attached by the tape 16 and the drive motor 20 winds the tape 16 which pulls the leader block 3, thus dragged by the tape 16 and also producing a frictional force), as shown in figures 1-2, and explained in column 7, lines 12-20.

Furthermore, Rueger shows the guide arm and the guide arm motor are arranged to controllably drag on a tape (since the motor 71 of the guide arm can also be used along with the drive motor 20, thereby understanding that the motors are controlled to adjust the drag on a tape), as shown in figures 1-2, and explained in column 7, lines 12-20.

Ohshita discloses the claimed invention except for the guide arm motor arranged to be dragged/controlled drag by the tape. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Ohshita to provide the guide arm motor to be dragged by the tape as taught by Rueger, to prevent the tape from having slack which causes jamming.

With respect to claims 18-20, appellant argues that the examiner has not established that it would be obvious to provide tension in the tape by electrical induction and magnetic resistance within the guide arm motor, and frictional resistance of the hub filler and guide arm.

As stated above, Ohshita in view of Rueger **inherently teach electrical induction and magnetic resistance, since an electric motor has a magnetic core producing magnetic resistance and generating voltage which can be determined by V(L)=L(inductance)x(di/dt)**. As explained above, dragging the hub filler will produce tension on the tape and frictional resistance by the guide arm since it is attached to the hub filler, which applies force to the hub filler in an opposite direction to a direction that the hub filler is traveling in the unloading operation.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Kathy Matecki

KATHY MATECKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600

SK
August 23, 2004

Conferees
Kathy Matecki
John Jillions

John A. Hankins
McDERMOTT, WILL & EMERY
600 13th Street, N.W.
Washington, DC 20005-3096